

In the claims:

Please amend claims 1-34 as follows:

1. (Currently Amended) A heat ~~Heat~~ sink designed as a flat heat pipe comprising a body, ~~with~~ at least one interior space formed in the body ~~of the heat sink~~ and closed toward the outside with at least one vapor channel ~~or vapor area (18, 18.1)~~, with at least one ~~fluid area or fluid channel (16)~~ that is connected to the at least one vapor channel (18, 18.1) and has a porous or capillary structure, and with several spatially separated posts ~~(6)~~ extending through the interior and between two opposing walls ~~or wall sections~~ delimiting the interior, whereby the posts ~~(6)~~ and the opposing walls ~~wall sections (3, 4)~~ are all made of a material with high heat conductivity, ~~for example of metal, e.g. copper, characterized in that~~ wherein each post ~~(6)~~ is connected at both ends directly with one of the opposing walls ~~wall sections (3, 4)~~.

2. (Currently Amended) The heat ~~Heat~~ sink as claimed in claim 1, wherein ~~characterized in that~~ the capillary or porous structure comprises ~~consists of~~ particles ~~(8)~~, which are connected with each other by ~~means of~~ bonding or sintering and/or with an adjacent surface ~~(10)~~ in such a way that capillary flow paths are formed between the particles ~~(8)~~.

3. (Currently Amended) A heat ~~Heat~~ sink designed as a heat pipe with at least one interior space formed in the body of the heat sink and closed toward the outside with at least one vapor channel ~~or vapor area (18, 18.1)~~, with at least ~~one fluid area or fluid channel (16)~~ that is connected to the vapor channel (18,

~~18.1)~~ and has a porous or capillary structure, wherein ~~characterized in that~~ the capillary or porous structure comprises ~~consists of~~ particles ~~(8)~~ made of ceramic, ~~which are~~ connected with each other and/or with an adjacent surface ~~(10)~~ by means of bonding or sintering, so as to form capillary flow paths between the particles ~~(8)~~.

4. (Currently Amended) The heat ~~Heat~~ sink as claimed in claim 3, further comprising ~~characterized by~~ several spatially separated posts ~~(6)~~ extending through the interior and between two opposing walls ~~or wall sections~~ delimiting the interior, whereby the posts ~~(6)~~ and the opposing walls ~~wall sections~~ ~~(3, 4)~~ are all made of a material with high heat conductivity, ~~for example of metal, e.g. copper,~~ and whereby each post ~~(6)~~ is connected at both ends directly with one of the opposing walls ~~(3, 4)~~.

5. (Currently Amended) The heat ~~Heat~~ sink as claimed in claim 3, wherein ~~one of the foregoing claims,~~ ~~characterized in that that~~ particles are connected with each other by means of metal stays, for example copper stays (9), e.g. by means of copper stays produced through DCB bonding.

6. (Currently Amended) A heat ~~Heat~~ sink comprising ~~designed as~~ a flat heat pipe having a body with at least one interior space formed in the body ~~of the heat sink~~ and closed toward the outside with at least one vapor channel ~~or vapor area~~, with at least one ~~fluid area or fluid channel that is~~ connected to the vapor channel and having ~~has~~ a porous or capillary structure, wherein ~~characterized in that~~ the capillary or porous structure comprising ~~consists at~~ least partially of a loose mass of particles ~~(8)~~ in a

space ~~(32)~~, which is separated from the fluid area by an intermediate wall ~~(31)~~.

7. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 6, wherein ~~11~~, characterized in that the intermediate wall ~~(31)~~ has a plurality of openings.
8. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 6, wherein ~~one of the foregoing claims~~, characterized in that the particles are such made of metal and/or ceramic.
9. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 3, wherein ~~one of the foregoing claims~~, characterized in that the capillary structure is formed from at least one ply or layer ~~(7)~~, which is applied at least on part of the inner surface ~~(10)~~ of the wall sections delimiting the at least one interior space ~~(2)~~, and enclosing the posts ~~(6)~~ at their respective connecting areas with these wall sections ~~(3, 4)~~.
10. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 9 wherein ~~one of the foregoing claims~~, characterized in that the layer forming the capillary structure is applied at least on a partial area of the surface of the posts ~~(6)~~.
11. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 3 wherein ~~one of the foregoing claims~~, characterized in that the posts ~~(6)~~ have a diameter that is considerably smaller in every direction of the diameter than the dimension of the interior in this direction of the diameter.

12. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 3 wherein one of the foregoing claims, ~~characterized in that~~ between the vapor space ~~(18, 18.1)~~ and the capillary structure forming the at least one fluid channel there is an intermediate wall ~~(17, 17.1, 29)~~.
13. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 12, wherein ~~characterized in that the~~ intermediate wall ~~(17, 17.1, 29)~~ is provided with a plurality of openings or is made of a perforated material.
14. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 12, wherein ~~one of the foregoing claims~~, ~~characterized in that the~~ at least one intermediate wall ~~(17, 17.1)~~ is parallel to the first wall sections ~~(3, 4)~~.
15. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 12, wherein ~~one of the foregoing claims~~, ~~characterized in that~~ the intermediate wall is formed from a pipe section ~~(29)~~, preferably from a pipe section pressed flat or formed in an oval profile.
16. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 9, wherein ~~one of the foregoing claims~~, ~~characterized in that~~ at least two capillary structures forming a fluid channel ~~(16)~~ and/or at least two vapor channels ~~(18, 18.1)~~ are provided for.
17. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 6, wherein ~~one of the foregoing claims~~, ~~characterized in that the~~ first and second wall sections are each formed from plate-shaped walls ~~(3,~~

4), which together with a peripheral wall ~~(5)~~ delimit the interior of the heat sink.

18. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 17, wherein ~~one of the foregoing claims,~~ characterized in that the first wall sections are formed from areas of a pipe section preferably pressed flat delimiting the interior of the heat sink.
19. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 4, wherein the heat sink comprises ~~one of the foregoing claims,~~ characterized in that it consists of several plates ~~(3, 4, 19)~~ located one above the other in the manner of a stack and connected with each other at the surfaces, of which plates in the inside of the stack are provided with openings ~~20~~ so that these openings form a channel structure through the interior of the heat sink and that the structured plates ~~(19)~~ are supplemented by areas outside of the openings ~~(20)~~ to the continuous posts ~~(6)~~ , and that the material forming the capillary structure is inserted in at least one area ~~(21)~~ of the channel structure.
20. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 19, wherein ~~one of the foregoing claims,~~ characterized in that the interior ~~(26, 28)~~ is formed by at least one depression or recess ~~(25)~~ in one of the plates ~~(23, 24)~~ forming the heat sink.
21. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 6, wherein ~~one of the foregoing claims,~~ characterized in that the particles ~~(8)~~ forming the capillary layer or structure ~~(7)~~ are provided in one

layer on the respective surface ~~(10)~~ of the walls delimiting the interior.

22. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 6, wherein ~~one of the foregoing claims,~~ ~~characterized in that~~ the particles ~~(8)~~ are connected directly with the respective surface ~~(10)~~, for example by means of DCB bonding.
23. (Currently Amended) A heat ~~Heat~~ sink as claimed in claim 6, wherein ~~one of the foregoing claims,~~ ~~characterized in that~~ the body of the heat sink is formed from a pipe section ~~(29)~~ that is closed at both ends.
24. (Currently Amended) A process ~~Process~~ for manufacturing a heat sink in the form of a heat pipe with at least one vapor channel formed in a closed interior and with at least one fluid channel with a porous or capillary structure, wherein ~~characterized in that~~ the porous or capillary structure is produced by insertion of a mass of particles made of a heat-resistant material, for example ceramic particles ~~(8)~~ and by subsequent DCB bonding upon heating to a bond temperature between 1065 and 1085°C.
25. (Currently Amended) A process ~~Process~~ as claimed in claim 24, wherein ~~characterized in that~~ the porous or capillary structure is produced by insertion of a mixture or mass of particles made of the heat-resistant material and pulverized copper oxide or oxidized copper particles and by subsequent DCB bonding.
26. (Currently Amended) A process ~~Process~~ as claimed in claim ~~24 or 25~~, wherein ~~characterized in that~~ the

mass or mixture additionally contains copper particles.

27. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that~~ claim 25, wherein, after bonding and cooling, the excess portion of the mass or mixture is removed.

28. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that~~ claim 24, wherein the capillary or porous structure or layer is produced before sealing the interior of the heat sink.

29. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that~~ claim 25, wherein the mass or mixture forming the capillary structure is inserted in the interior through at least one opening and is distributed there before bonding, ~~for example by shaking, vibration and/or~~ or turning.

30. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that~~ claim 24, wherein during the manufacture of the porous or capillary structure at least one part of the interior of the heat sink forming a vapor area is filled or kept free by means of a support medium ~~(30, 31)~~ before bonding of the particles forming the porous or capillary structure.

31. (Currently Amended) A process ~~Process~~ as claimed in claim 30, wherein ~~characterized in that~~ the support medium ~~(30)~~ is removed after bonding or after manufacturing the porous or capillary structure.

32. (Currently Amended) A process ~~Process~~ as claimed in claim 30 ~~or 31, characterized in that~~ wherein the support medium ~~(30)~~ remains in the heat sink.
33. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that~~ claim 30, wherein the support medium ~~(30)~~ is a particle-like medium, ~~for example particles made of the heat-resistant material without the bond material.~~
34. (Currently Amended) A process ~~Process~~ as claimed in claim 30, wherein the ~~one of the foregoing claims, characterized in that~~ support medium is formed from a wall ~~(31), for example from a pipe section forming this wall.~~